

RESOURCE MANAGEMENT PLAN

MORICE FOREST DISTRICT

2000 - 2004



Ministry of Forests

Morice Forest District Resource Management Plan

**This Resource Management Plan is submitted in fulfillment of
conditions and obligations in the MULTI-YEAR AGREEMENT
(Services) between the Ministry of Forests and Forest Renewal BC**

Approved by:

W. J. (Bill) Warner, RPF
District Manager

date _____

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1.0 Introduction

The following document is a Resource Management Plan for the Morice Forest District. It examines 'investment needs' of the forested land based in consideration of the longer term implications. This examination is directed at the Land Based programs which include:

- Sustainable Harvest Component;
- Enhancing Environmental Values component;
- Road and Bridge Maintenance
and
- Recreation Site and Trail Maintenance

For each of the above programs, this plan provides the strategic objective for managing the resources under each program along with the strategies and opportunities necessary to meet that objective. Investment priorities and opportunities have been identified along with the 'critical' and optimal levels of delivery for each activity.

A significant portion of the funding for these investments is provided through the Skeena Region of Forest Renewal BC (FRBC) under their land-based programs. Most of the resource investments will be delivered by stakeholders other than government ministries.

The ministries are mandated by legislation to undertake planning functions related to the management of Crown forest land and must provide FRBC and the other stakeholders guidance as to which activities are sound resource investments for achieving the resource management objectives. Often that includes considerations into the timing, quantity and location of the work in addition to the type of work that needs to be delivered. For a variety of reasons some of this work is 'critical' while other works may be considered a lower priority and not recommended at this time.

With this document for guidance, FRBC will be able to make better investment decisions. It will allow merging of the biological and land based needs of the natural resources with other objectives of FRBC.

This document will be updated annually to reflect new information and priority changes.

2.0 Purpose

The purposes of this RMP are to:

- Identify MoF and MELP management resource objectives and priorities;
- Recommend investment opportunities in support of Forest Renewal BC strategic objectives eligible for investment funding; and
- Identify funding requirements for the ministrie's objectives and resource priorities eligible for funding from sources other than Forest Renewal BC.

3.0 Process and Procedures

The 1996 Morice Timber Supply Analysis (TSA) and the draft incremental silviculture strategy documents were used to identify TSA issues and land based investment opportunities for the Sustainable Harvest (SH) component. A consultation meeting was held with the major licensees' representatives to present and review the identified investment opportunities and their impact on timber supply. A summary of the (SH) component consultation meeting is included in the Sustainable Harvest Component section of this RMP.

4.0 Overview of timber supply and other resource management issues

Issues relating to timber supply in the Morice TSA are described in detail in the Sustainable Harvest Component section of this RMP. In summary, the Morice TSA has a strong timber supply situation. The nature of the Morice TSA makes it a potential candidate for an increase in AAC that is sustainable for a relatively long period. To confirm this assumption, detailed forest level analyses will be needed (Type I or II).

5.0 THE SUSTAINABLE HARVEST COMPONENT

5.1 Introduction

The Sustainable Harvest component of this .MP contains resource priorities for backlog reforestation, stand tending, forest health enhancement, forest health maintenance, and current fire and pest funding opportunities. Planned activities must be consistent with:

- ◆ acts, regulations, guidelines and priorities set in higher level plans;
- ◆ the government's goals; and
- ◆ the MoF's guiding principles for silviculture;
- ◆ and be developed within the context of the *Incremental Silviculture Strategy for British Columbia (interim)*;
- ◆ and consider riparian and habitat issues;
- ◆ and result in no expected loss of investment due to fire, forest health issues, or alienation of land;
- ◆ and have reasonable cost estimates within the cost caps provided;
- ◆ and include activities that fit within FRBC strategic or operational commitments;
- ◆ and have activities that fit within criteria for forest health maintenance and current fire and pest management.

Within the context of regional RMP priorities, MoF, MELP and industry will work collaboratively as "tenants in common" to identify objectives, priorities and actions to achieve desired forest conditions. The focus will be on achieving the changes in forest condition that lead to the greatest common good for the TSA as a whole.

The following table shows the list of program areas which are part of the Sustainable Harvest Component

Activities that may be part of the Sustainable Harvest Component

Program	Description	Activities
Stand Tending	Silvicultural treatments to free growing stands to enhance their value, volume, biodiversity, habitat supply and health.	Spacing, pruning, fertilization and associated surveys and prescriptions.
Backlog Reforestation	Activities applied to backlog NSR and impeded areas with the objective of improving timber growth, yield, value and habitat supply on these sites.	Site preparation, planting, brushing and associated surveys and prescriptions.
Site Restoration	Specific silviculture activities applied in watersheds to stabilize land or soil, bring land back into a productive state for timber production, and restore or enhance riparian management zone conditions.	Rehabilitation and reforestation of roads, riparian management zone reforestation, and stand tending activities.
Forest Health Enhancement	Activities to improve the value of the forest resource by reducing the incidence and impact of root rot diseases, dwarf mistletoe, terminal weevils and stem rusts.	Pop-up treatment for root diseases; prune larch seed-trees to reduce mistletoe spread; sanitation spacing for rust and mistletoe infected pine stands; rehabilitate chronically infested root disease and dwarf mistletoe sites. Prune white pine to protect trees from blister rust infection and lodgepole pine for stem rusts.
Forest Health Maintenance	Activities to protect mature timber from insects and disease (primarily the control of bark beetles and defoliators). These activities are included for MoF planning needs.	Fall and burn treatments, MSMA treatments, defoliator spraying, pheromone baiting, and aerial and ground surveys.
Current Fire and Pest	Activities to reforest and tend areas that have been denuded by current fire and pests. These activities are included for MoF planning needs.	Site preparation, planting, brushing, maximum density spacing, and associated surveys and prescriptions to produce free growing stands.

5.2 Morice TSA Basic Data

(source: L. P. Atherton & Associates, 1998, Incremental Strategy For British Columbia, Background Report 7)

Land Area

Description	Area (ha)	Area %
Total Area of TSA	1 498 700	100
Total Productive Crown Forest	1 003 400	67
Net Timber Harv. Land Base	634 400	42

Source: TS analysis report - rounded to nearest 100 ha.

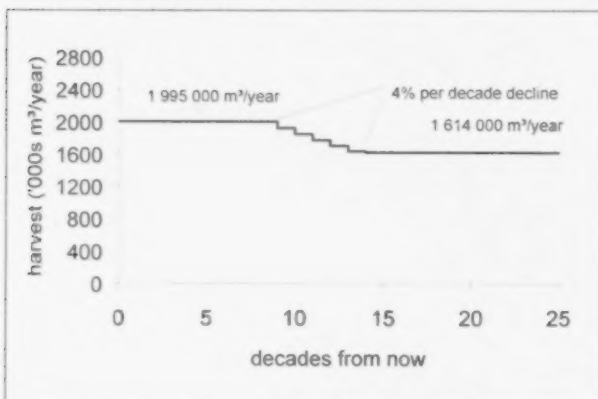
AAC

AAC Type	Pre-TSR (m ³)	TSR1* (m ³)	Change (%)
Conventional	1 985 815	1 985 815	0.0
Deciduous	-	-	-
Insect/Disease	-	-	-
Marginal	-	-	-
Total	1 985 815	1 985 815	0.0

Woodlot AAC	Not included in conventional AAC	14 185
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*effective November 1/96

Harvest Forecast



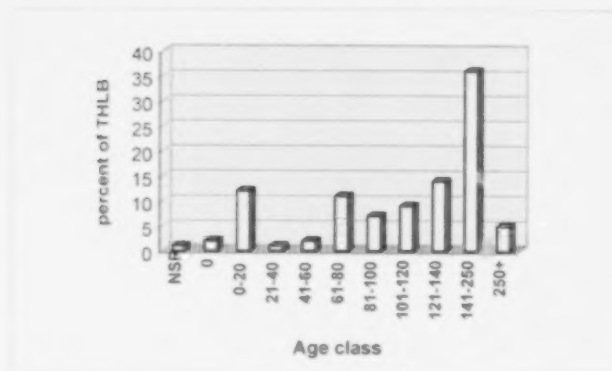
source: Timber supply Analysis, Morice TSA, MoF, 1996

Site Class

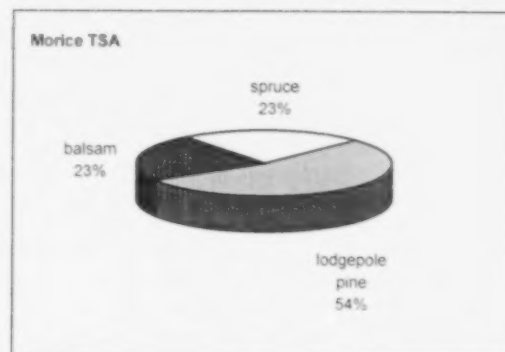
data not available

Age Class

Data scaled from chart in the 1996 TS analysis report.



Tree Species



5.3 Morice TSA Issues

5.3.1 Individual Issue Analysis

- | | |
|--------------------|--|
| ◆ Harvest Forecast | The pre TSR AAC of 1 995 000 m ³ (2 000 000 less an assumed woodlot AAC of 5 000 m ³) can be maintained for 90 years after which it declines at a rate of 4%/decade to a long term harvest level in 140 years of 1 614 000 m ³ , 19% lower than the initial level. |
| ◆ Age Class | Approximately 56% of THLB in stands > 120 years old. Very few stands aged 21 to 60 years old. |
| ◆ Forest Cover | <p><i>IRM Zone:</i> 88% of THLB. Base case requirement of at most 25% of THLB permitted to be < 3 m tall (4 pass system). Sensitivity test of ± 1 pass.</p> <p><u>Relaxation:</u> (3 pass) Insensitive. This requirement was not a limiting factor in the base case.</p> <p><u>Increase:</u> (5 pass) Short term insensitive. Reduction to LTHL begins 4 decades earlier than base case. LTHL 1.5% higher than base case due to stands having to be harvested at slightly older ages which are closer to culmination age.</p> <p><i>Visual Quality & Riparian Zones:</i> 12% of THLB. Base case requirement of at most 6% (retention VQO), 18% (partial retention VQO) and 28% (modification VQO) to be < 5 m tall. Sensitivity test of $\pm 10\%$. Insensitive in short term to either.</p> <p><u>Relaxation:</u> (+10%) Slightly sensitive mid and long term. Initial harvest levels maintained one decade longer than base case. LTHL 1% higher.</p> <p><u>Increase:</u> (-10%) Moderately sensitive - Falldown begins 2 decades earlier than base case. LTHL reduced 2%.</p> <p><i>Green-up:</i> Green up ages 14 yrs for 3 m (non-VQ) and 20 - 21 yrs for 5 m (VQ). Sensitivity test of ± 5 years (equivalent to more than a 1 m change in green-up hts). Short term insensitive.</p> <p><u>Relaxation:</u> (- 5 yrs) Insensitive. LTHL 1% higher.</p> <p><u>Increase:</u> (+ 5 yrs) Very sensitive mid term - initial harvest level can only be maintained for 3 decades (6 less than in the base case). LTHL 2% higher than base case as the extended age at which stands are harvested are closer to culmination ages.</p> |
| ◆ Backlog NSR | 5 300 ha of backlog NSR. Time frame in which this is restocked is not given. Assume restocking to be already incorporated in analysis. |
| ◆ Quality | <ul style="list-style-type: none">• 44 922 ha of non-merchantable forest types deducted from THLB (all deciduous, Douglas-fir, cedar, hemlock, white pine and yellow pine; all spruce leading mixed with fir and hemlock; lodgepole pine leading with fir mix). This is equivalent to 8% of the THLB.• 175 760 ha of low productivity sites deducted from THLB (balsam with SI < 10 m, spruce with SI < 10.5 m, and lodgepole pine with SI < 12 m). This is equivalent to 30% of the THLB. <p>Industry contends 26 000 ha of low productivity stands near the margin and 25 000 ha of low productivity immature stands should not have been deducted. This constitutes almost 9% of the THLB. Sensitivity analysis indicates the current harvest level can be maintained for 390 years were the THLB increased 15% (presumably based on average sites), indicating considerable long term potential.</p> |

- ◆ Older Forests

Base case does not include a requirement for old growth or biodiversity as there were no specific provisions applied operationally in the TSA at the time of analysis.

Relaxation: N/A

Increase: (10% of stands of age ≥ 140 yrs). Has a similar effect to decreasing the land base. Current harvest levels can only be maintained for 40 years, 50 less than the base case, and LTHL reduced 9% below base case.
- ◆ Min. Harvest Ages

Age at which balsam stands attain 200 m³/ha (100 to 150 yrs for existing stands and 70 to 120 yrs for regenerated stands), and spruce (90 to 110 yrs for existing stands and 60 to 90 yrs for regenerated stands) and lodgepole pine (60 to 80 years for existing stands and 50 to 60 years for regenerated stands) stands attain 150 m³/ha. 71% of THLB above the minimum harvest age. Sensitivity analyses of ± 20 yrs.

Decrease: (-20 years) Insensitive. Most stands are harvested in the base case at ages higher than minimums. Thus lowering further has no effect.

Increase: (+20 years) Short term insensitive **Mid-term drop commences 5 decades sooner than base case.** LTHL 2% higher than base case as increasing minimum ages results in stands being harvested closer to their culmination age (analysis, 28). (An increase of 30 years would make min ages older than culmination, resulting in a lower LTHL [analysis, 28])
- ◆ Silvicultural Systems

Most of the THLB is currently managed under a clearcut harvesting system. Some clearcut with reserves and patch cuts. All harvested areas are planted.
- ◆ Estimates of Timber Volumes

VDYP used for existing stands > 20 years of age. TIPSYP used for regenerated stand volumes and existing stands ≤ 20 years of age.

Existing stand volumes: Some concern regarding older stand volumes being over-estimated, although a comparison between actual harvest volumes and VDYP volumes effectively shows no difference. Sensitivity test for $\pm 20\%$ in volume. Long term insensitive.

Increase: (+20%) Moderately sensitive in mid term only. Current harvest level can be maintained for 160 years (7 decades longer than base case), before falling to base case LTHL.

Decrease: (-20%) **Highly sensitive.** Current harvest level only maintained for 1st decade after which harvest levels decline to the same LTHL as in the base case, which is reached 8 decades earlier.

Regenerated stand volumes: Sensitivity tests for $\pm 20\%$ in volume. Short term insensitive to either. **Highly sensitive to both in long term.**

Increase: (+20%) Current harvest level maintained for at least 250 years. Ultimate LTHL (beyond 250 yrs) 21% higher than base case.

Decrease: (-20%) LTHL 17% lower than base case. Transition to LTHL commences 4 decades earlier than the base case.
- ◆ Site Productivity

This TSA was the only management unit in which site index adjustments were fully incorporated into the timber supply analysis during the first TSR. Alone, this results in an 18% increase in LTHL. When combined with managed stand yield curves (from TIPSYP), it results in a 42% increase above unmanaged (existing) stand yields (using VDYP). (rationale, 20).
- ◆ Regen Delay

All harvested areas are planted. Base case regen delays of 4 yrs. Sensitivity test of ± 2 years. Affects both the green-up period (especially in VQO zones) and volumes at harvest.

Increase: (+2 yrs) Mid term reduction in harvest levels commences 2 decades earlier than in base case. LTHL 2% below base case.

Decrease: (-2 yrs) Insensitive short and mid terms. **Very sensitive in long term.** LTHL 4% higher than base case.

5.3.2 Summary of Issues by Period

Short Term (1 to 20 years)

The abundance of mature timber and the relatively good operating area of the TSA result in a very stable short term timber supply. Under most scenarios, the current harvest level can be maintained for at least 50 years. The only factor that could possibly result in a lower short term harvest level, and even then only beginning in the second decade, is if existing stand volumes were overestimated by 20%. This is an unlikely scenario, however.

Mid Term (21 to 140 years)

The mid term timber supply is a generally-smooth transition over a span of 5 decades from the current harvest level to the long term harvest level. No sensitivity analysis scenario resulted in a mid term shortfall below the LTHL. Sensitivity tests generally indicated an earlier or later commencement of the mid term. As in the short term, the mid term is highly impacted were existing stand volumes prove overestimated. It is also sensitive to factors that in effect result in reducing the amount of older timber available, such as the institution of a 10% older forest requirement or a 15% reduction in the land base. A 20% reduction in regenerated stand volumes brings on an earlier commencement of harvest reductions due to the need to stretch existing stands over a longer period. A five year increase in green-up ages brings on the transition to lower long term harvest levels 6 decades earlier than the base case so that it begins after 3 decades.

On the positive impact side, a 20% increase in existing stand volumes (unlikely as a measurement phenomenon, but some increase possible through management) allows current harvest levels to be maintained for 160 years. A 20% increase would enable the current harvest level to be maintained almost indefinitely.

Long Term (141 + years)

As is the case in virtually all management units, the long term is sensitive to changes in regenerated stand volumes. A 20% increase or decrease in regenerated volumes results in a respective 21% increase or 17% decrease to LTHL. A 20% increase would enable the current harvest level to be maintained almost indefinitely.

The long term is also sensitive to increasing harvests in or rehabilitating forests considered non-merchantable or on low productivity sites. Together, this amounts to an area which is the equivalent of 38% of the THLB. This would effectively amount to increasing the THLB. Based on the average of all sites, a 15% increase in the THLB would allow the current harvest level to be maintained almost indefinitely.

A 2 year reduction in regeneration delay (from 6 years down to 4) results in a significant 4% increase in LTHL.

Future

An LRMP process was expected to begin sometime after the TSR1 process was complete. The resultant plan is likely to place additional restrictions on harvesting.

Older forest, biodiversity and Forest Practices Code requirements are likely to have measurable future impacts on timber supply.

5.4 Incremental Silviculture History

Treatment	TRS I Status (1996)		Current Status (1999)
	Incorporated in Timber Supply Analysis	Not Incorporated in Timber Supply Analysis	
◆ Backlog	5,300 ha of backlog NSR. Time frame for rehabilitation not specified.		5,592 ha of NSR identified. Approx 2,022 ha can be restocked. TSR I assumed all areas regenerated.
◆ Conversion		None indicated.	
◆ Commercial Thin		Experimental. 250 ha CT'd in the 2 yrs prior to the analysis.	
◆ Space	TIPSY used on stands regenerated over the past 20 years. Assumes incremental spacing for stocking control on stands harvested prior to 1987.	Only a small portion of THLB spaced. One licensee has FRBC funding to assess overstocked PI for spacing.	Approx 6,500 ha spaced since 1973
◆ Prune		None indicated.	688 ha pruned since 1991. All areas pruned were previously spaced.
◆ Fertilize		Only a small portion fertilized.	3,246 ha fertilized since 1987. All areas fertilized were previously spaced or spaced and pruned.
◆ Space/Prune		Combinations not indicated.	
◆ Space Fertilize		"	
◆ Space/Prune/Fertilize		"	
◆ Other		None indicated.	

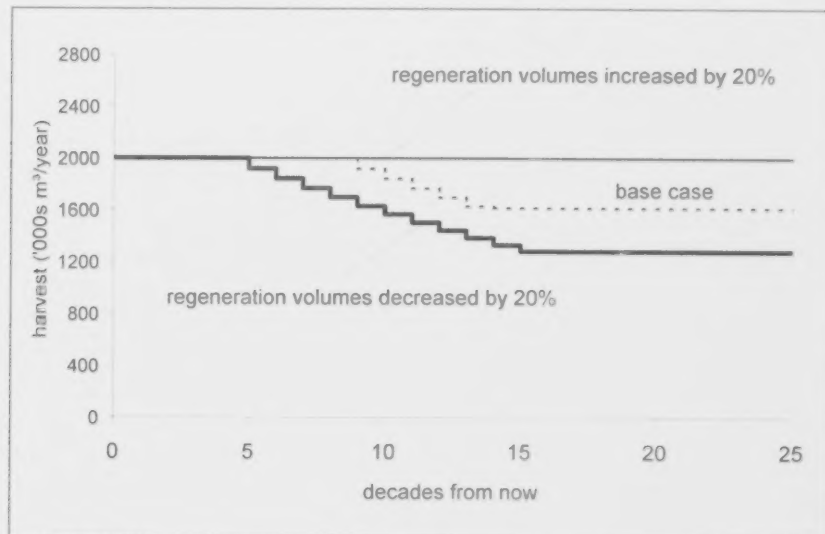
5.5 Opportunities to Increase Timber Supply

Although the Chief Forester considered and rejected the possibility of increasing the AAC, increasing harvest levels above the current level could be considered as a possibility under a silviculture strategy. ***If a provincial strategy is to maintain current harvest levels then the short term timber supply in some TSA's must go up in order to compensate for those TSA's where little or nothing can be done to prevent a drop. The nature of the Morice TSA makes it a potential candidate for an increased AAC that is sustainable for a relatively long period.***

A strategy to directly increase short term harvest levels would be to fertilize thrifty immature stands 10 to 15 years prior to harvest to boost existing stand volumes. In 1996, the District has identified and surveyed approximately 12,000 hectares of age class 3 and 4 leading Lodgepole pine stands. Most of these unmanaged stands presented adequate attributes to respond well to a fertilization treatment.

A potential strategy to accomplish an increase in harvest levels could be to induce an allowable cut effect by increasing long term harvest levels and shifting some of the benefit into increased short term harvests. This would have the added benefit of reducing the risk of losses from fire, pests and decay in the large stock of existing mature timber. Strategies to increase long term harvests include increasing regenerated stand volumes and increasing the timber harvesting land base through rehabilitation of non-merchantable stands and increasing site productivity of some treatable low-site stands. Site rehabilitation and treatment on low productivity stands seems an unlikely scenario with the limited information we have on these sites.

Due to the small amount of stands between the age of 20 and 60 years old, another strategy to increase the timber supply would be to commercial thinned and fertilize immature stands (50-60 years old) using frequent light thinning entries. This would have the added benefit of increasing the total yield of treated stands as well as redistributing the age classes into a more even distribution by delaying final harvest. In addition, the spacing and multiple fertilization of age class 1&2 stands would speed up development; increasing volumes in order to fill the age class imbalance by making the treated stands available sooner for harvest or commercial thinning. A 20% increase in regenerated stand volume would allow current harvest levels to be maintained for 160 years.



Harvest forecast for 20% uncertainty in regenerated stand volumes — Morice TSA, 1995.

5.5.1 Potential Strategies by Response Time Frame

Response Time Frame	Objective/Action	Anticipated Result
♦ Short Term	1. Fertilize suitable thrifty immature stands 10 to 15 years prior to planned harvest. 2. See long term.	A forest level analysis (type I) will be required to fully assess the potential benefit of a fertilization program. Current literature indicates a gain of 12 m ³ /ha from a single fertilization (N and S) applied at the age of 25 years.
♦ Mid Term	1. See long term.	Smooth transition to lower LTHL.
♦ Long Term	1. Increase regenerated stand volumes 20% by: • reducing regen delay from 4 yrs to 2 or less years by planting immediately following harvesting; • planting large, genetically improved stock; • spacing and multiple fertilization of suitable stands; • managing voids so that TIPS Y OAF1 does not exceed 10%. 2. Increase the THLB by 15% by rehabilitating a portion of: • non-merchantable forest stands; • low productivity forest stands. 3. Commercial Thinning/fertilization	A forest level analysis (type I) will be required to fully assess the potential benefit on timber supply Option 2 is unlikely with current information available.

5.5.2 Available information regarding potential treatments and treatable area

Treatment	Treatable Area	Comment
♦ Fertilization	The Morice TSA currently has approximately 12,000 ha of unmanaged Age class 3&4 and approx 6,500 ha of age class 1&2 spaced stands. The majority of these areas could be immediate candidate for multiple fertilization. In addition, there is approximately 5,500 ha of identified age class 1 & 2 candidate stands for spacing.	54% of THLB is PI, a species which responds to fertilization. Over 25% of THLB is in thrifty immature age classes and may be candidates.
♦ Spacing	Approx. 5,500 ha of identified age class 1 & 2 candidate stands for spacing. Approx. 2,200 ha currently under prescription.	Benefit from spacing will come from making stands available for commercial thinning and by creating the right conditions for fertilization treatments. Follow up treatments to spacing are necessary to ensure potential timber supply increase and financial return.

♦ Commercial Thinning	Unmanaged age class 1 & 2 can be set up for CT candidate through pre-commercial thinning treatment. 12,000 ha of unmanaged age class 3&4 leading Lodgepole pine stands could be candidate for CT. 11% of THLB aged 61 to 80 years and may be candidates. Approx. 5,500 ha of identified age class 1&2 stands could be set up for CT. Approx. 2,200 ha currently under prescription.	Specific regimes would need to be determined through detailed forest level analyses (Type I).
♦ Rehabilitation		Equivalent of 38% of THLB deducted as non-merch or low productivity and may be candidates.
♦ Backlog NSR	TSR 1 assumed that all NSR to be restocked. The current data indicate 5,592 ha of NSR of which approx 2,022 ha can be restocked. Fill planting on marginally stocked stands will help reduce OAF 1 to less than 10%.	All areas were assumed rehabilitated in the timber supply analysis (TSR I). NSR backlog planting will act as maintaining the current AAC rather than increasing the long term harvest.

Alternative Harvest Forecast Scenarios

(Impact of proposed activities will need be to be quantified through a Type I or II analysis)

5.6 Opportunities to Improve Timber Quality

The effects of incremental silviculture on the future quality of the timber resource were not analyzed in the last timber supply review. Moreover, the District currently does not have specific timber quality objectives. Premium logs will be available in the short and mid terms due to the large proportion of old forest in the Morice TSA. In the interim, the Morice TSA will follow the provincial strategy to ensure that quality timber is available in the long term.

5.6.1 Potential Strategies by Response Time Frame

Response Time Frame	Strategy/Action	Anticipated Result
♦ Short Term	None	
♦ Mid Term	Space/Prune 100 ha/year of up to 5 m log until funding becomes available to reach 500-600 ha per year to meet provincial objectives. Manage for clear timber through long rotation	
♦ Long Term	As above	

Alternative Timber Quality Forecast Scenarios

(Impact of proposed activities will need to be quantified through a Type I or II analysis)

5.7 Interim Silviculture Strategy

5.7.1 Maintenance activities (backlog reforestation)

Ensure basic legal obligations and plantation maintenance activities are addressed as the **highest priority**.

Working Target 1:

Maintain the LTHL (Long Term Harvest Level) by ensuring that previous plantations are protected and regenerated stand volume is not compromised.

Strategies to meet Working Target 1:

- A. Conduct an *accelerated* stocking/free growing assessment to maintain up to date information on land status and brushing treatment needs. Attempt to prepare a treatment prescription in accordance with Ministry Policy immediately after the survey season for every site proposed for brushing treatment.
- B. Conduct brushing treatments on high risk stands to ensure that existing plantations remain Satisfactorily Restocked (SR) and achieve free growing status by the year 2010.
- C. When possible and economically viable, implement stand improvement treatments (brushing treatment) that will increase the number of free growing stems on marginally free growing stands to produce higher volume stands.

Working Target 2:

Increase productive area by rehabilitation and reforestation of sites currently classified as **NSR** to maintain the LTHL.

Strategies to meet Working Target 2:

- A. Conduct an *accelerated* stocking assessment program to maintain up to date information on land status and site preparation and planting treatment needs. Attempt to prepare a backlog SP or a planting prescription immediately after the survey season for every site proposed for planting or fill planting.
- B. For Backlog areas disturbed between January 1, 1982, to September 30, 1987, establish baseline information upon which to rank areas for treatment, and to develop Backlog Silviculture Prescriptions. Where economically viable, complete all site preparation and planting on **Good, Medium, and Poor** sites by the year 2002.
- C. For Backlog areas disturbed before January 1, 1982, identify **Good and Medium** sites first, then Poor and Low sites, and confirm that indicated site productivity is correct. Establish baseline information upon which to rank areas for treatment and to develop Backlog Silviculture Prescriptions. Where economically viable, complete all site preparation and planting on **Good and Medium** sites by the year 2002.

The following areas should **NOT** be scheduled for planting:

- C.1. Areas where the average age of well-spaced stems is less than 12 years and stocking exceeds existing minimums for the ecosystem association (Reference: *Establishment to Free Growing Guidebook*).
- C.2. Areas where the average age of well-spaced stems is 12 years or greater and the number of well-spaced stems is 60% of the Guidebook minimum's. This is a guideline only. Each block should be individually considered before applying this reduced stocking standard.
- C.3. Areas coded as inoperable or environmentally sensitive.
- D. Use 'A' class seed or better and large planting stock in order to increase regeneration stand volume and minimize future brushing treatment.
- E. Do not reforest if the cumulative cost of all brushing treatments is estimated to exceed \$1500 per hectare.

5.7.2 Incremental activities

Working Target 3:

Carry out a wide range of silviculture treatments that will provide a *diversified portfolio of forest products and conditions* in order to minimize risk and better respond to future market conditions. Ensure the development of regimes that will increase the regenerated stands volume to minimize the *mid term¹ provincial shortfall* and attempt to maintain the current AAC as the LTHL in the Morice TSA. Attempt to increase the overall log quality.

Strategies to meet Working Target 3:

- A. Develop a series of density management regimes to ensure a wide range of densities, forest conditions and habitats are maintained over the landscape. These regimes may include juvenile spacing, fertilization, pruning, commercial thinning and no-treatment options. Until such specific regimes are developed, the *interim strategy* is to produce stand density management prescriptions that will maximize piece size without compromising the total volume production and that will leave opportunities for fertilization and commercial thinning.
- B. Implement various regimes of density control that will maximize MAI, volume and piece size in age class 1 & 2 stands.
- C. To set up stands for commercial thinning using density control treatments in order to provide interim harvest without reducing the potential of the residual stand.
- D. Implement a fertilization program targeting first, previously spaced age class 3 & 4 pine stands and thrifty immature untreated pine stands with favorable live crown size and vigor. Secondly, fertilize younger stands with room for crown expansion.

¹ The mid term timber supply is a generally-smooth transition over a span of 5 decades from the current harvest level to the long term harvest level. The mid term is characterized by a decline in AAC at a rate of 4%/decade to a long term harvest level in 140 years of 1 614 000 m3, 19% lower than the initial level.

- E. When biologically and economically feasible, treat suppressed age class 3 & 4 pine stands classified as low productivity sites. Treatment options should include spacing, mechanical spacing with salvage or site rehabilitation.
- F. Investigate options for rehabilitation of non-merchantable forest stands.

5.8 Silviculture Program

The following annualized program will achieve the above goals and strategies.

MORICE
Table A: Backlog
Prepared: September 23,

	Five-year Plan Goals (ha)					Annual Plan 2000/01			
	2000/ 2001	2001/ 2002	2002/ 2003	2003/ 2004	2004/ 2005	Funding (\$000)	Unit Cost (\$)	Priority	Funding Source
Legal Obligations									
1 Planning/surveys/prescriptions	0	0	0	0	0	\$0	\$0		
2 Site preparation	0	0	0	0	0	0	0		
3 Planting	0	0	0	0	0	0	0		
4 Brushing	0	0	0	0	0	0	0		
5 Seed purchase	0	0	0	0	0	0	0		
6 Max. density spacing	0	0	0	0	0	0	0		
7 Pruning	0	0	0	0	0	0	0		
Totals	0	0	0	0	0	0	\$0		
Backlog Reforestation									
1 Planning/surveys/prescriptions	0	0	0	0	0	\$0	\$0		
2 Site preparation	63	0	0	0	0	52,650	836	HIGH	FRBC
3 Site restoration road/land rehab	0	0	0	0	0	0	0		
4 Planting	0	603	0	0	0	0	0	HIGH	FRBC
5 Brushing	0	0	0	0	0	0	0		
6 Seed purchase	0	0	0	0	0	0	0		
Totals	63	603	0	0	0	\$52,650	\$836		
Impeded areas									
1 Planning/surveys/prescriptions	6200	6200	6200	6200	6200	\$178,400	\$29	HIGH	FRBC
2 Site preparation	0	0	0	0	0	0	0		
3 Planting	0	0	0	0	0	0	0		
4 Brushing	200	380	380	380	380	130,000	650	CRITICAL	FRBC
5 Seed purchase	0	0	0	0	0	0	0		
Totals	6400	6580	6580	6580	6580	\$308,400	\$48		
Backlog Activities - Management Unit Total									
1 Planning/surveys/prescriptions	8200	6200	8200	6200	8200	\$178,400	\$29		
2 Site preparation	63	0	0	0	0	52,650	836		
3 Site restoration road/land rehab	0	0	0	0	0	0	0		
4 Planting	0	603	0	0	0	0	0		
5 Brushing	200	380	380	380	380	130,000	650		
6 Seed purchase	0	0	0	0	0	0	0		
7 Max. density spacing	0	0	0	0	0	0	0		
8 Pruning	0	0	0	0	0	0	0		
9 Studies	0	0	0	0	0	0	0		0
Totals	8463	7183	8580	6580	8580	\$361,050	\$56		

MORICE TSA
Table B: Stand Tending Activities
Prepared: September 23, 1999

Activities	Five-year Plan Goals (ha)					Annual Plan 2000/01			
	2000/ 2001	2001/ 2002	2002/ 2003	2003/ 2004	2004/ 2005	Funding (\$000)	Unit Cost (\$)	Priority	Funding Source
1 Planning/surveys/prescriptions	0	300	300	300	300	\$0	\$0	MOD	FRBC
2 Spacing	700	800	800	800	800	525,000	750	HIGH	FRBC
3 Pruning	100	100	100	100	100	125,000	1,250	MOD	FRBC
4 Fertilizing	500	1000		1000	0	150,000	300	HIGH	FRBC
5 Studies	0	0	0	0	0	0	0		
6 Other	0	0	0	0	0	0	0		
Totals	1300	2200	1200	2200	1200	800,000	\$615		

5.9 Sustainable Harvest Consultation Meeting

Minutes - September 16, 1999

Attendees:

John Brockley, Northwood Inc.

Deidre Quinlan, Houston Forest Products Co.

François Ouellet, Ministry of Forests, Morice District

- 1) MoF introduced the draft incremental strategy for the district in the context of the provincial strategy. Strategies to increase or maintain timber supply were discussed (fertilization and spacing with multiple fertilize).
- 2) All parties agreed that maintenance treatments (brushing and fill planting) will be the highest priority. Treatments targeted to increase timber supply through intensive stand tending would come second.
- 3) Fill planting on some sites will require some form of site preparation. Licensees were concerned by the fact that site prep is expensive and does not provide a lot of employment per dollar spent. The other concern expressed by MoF was that no party has a Pesticide Use Permit in place. MoF will be working with both licensees to address this concern.
- 4) In order to minimize planning cost related to manual brushing treatments, it was decided to identify some blocks that would not be laid out. The strategy is to identify the brushing area on a map or photo and tender it as such, leaving the layout work to the brushing contractor. Areas would only be estimated.
- 5) Based on the strategies presented under item 1) MoF highlighted the importance of following up with the treatment regimes identified in the SMP documents. In order to contribute to maintaining or increasing timber supply, follow up treatments such as fertilization and pruning must be implemented to complete the treatment regimes. It was decided to look at previous investments before continuing with a spacing program to ensure we can complete the regimes prescribed. As a first priority, fertilization in previously spaced age class 3 & 4 stands would be the higher priority for a fertilization program.
- 6) MoF introduced the idea of implementing a small fertilization program to follow up on previously spaced areas. Both licensees were concerned by the fact that fertilization treatments do not provide employment. John Brockley was concerned that if a fertilization program were implemented, Northwood would not be able to meet their employment commitments with several contractors.
- 7) Licensees suggested that the 50%-25%-25% split between programs be reviewed to increase the SH portion to accommodate a fertilization program.
- 8) MoF expressed concerns that timber quality objectives were poorly addressed. The district should attempt to maintain a small pruning program in the order of approx 50 to 100 ha per year.
- 9) Both licensees agreed that all approved SMPs would be used based on priority regardless of who prepared the prescription.

- 10) It was decided to start spacing in age class 3 stands in the Klo Creek area. Each company would take 1 block each.
- 11) The District will continue with a smaller survey program for the next fiscal. Based on 1999 survey information, treatment recommendations will be prioritized against approved SMP's and a decision will be made for the development of new prescription to address brushing treatments of fill planting needs.
- 12) MoF will prioritize blocks for fill planting and will do the seedling requests in October 1999 for fill planting in the spring of 2001. The workplan will need to be adjusted to address budget needs.

5.10 Forest Health Maintenance Strategy

The following summarises the steps taken in managing Bark Beetles in the Morice District:

- A. A district Bark Beetle Strategy is in place which outlines: process; responsibilities; and timeframes for the management of bark beetles within the district.
- B. Forest cover information is prioritized to determine the Bark Beetle Hazard Rating for areas throughout the district. This process identifies the susceptibility of stands to specific bark beetles by evaluating factors such as: age, species composition and site index to determine areas that are at the greatest risk of beetle attack.
- C. Bark Beetle Hazard and past history information is used to conduct district overview flights. Overview flights are the initial step in identifying beetle infestations. These flights are conducted jointly between MOF and the local major licensees during mid July to early August each year. Overview flights identify and GPS locates visible infestation centres.
- D. Overview meetings take place in July/Aug shortly after the overview flights are conducted. Present at these meetings are representatives from MOF Forest Health and Small Business sections as well as representatives from both major licensees. At the meetings the mapped overview flight information is used to make some preliminary decisions on responsibilities and appropriate treatment options. Delineation of responsibility and choice of appropriate treatment is decided upon jointly following provincial guidelines for Bark Beetle Management Responsibilities. Making joint decisions on treatment options in July/Aug has several benefits as opposed to waiting for the more formal process of submission, review and approval of Bark Beetle Management Plans in Dec/Jan. These benefits include:
 - D.1. Allowing for the use of MSMA on those sites which are deemed unsalvageable or untreatable by other means as MSMA treatment is only viable during a short window immediately after the tree has been attacked for the first time.
 - D.2. Allowing for a jump-start to the planning, review, and referral process by Small Business and the licensees for those sites designated for harvesting. Also allows for preliminary decisions to be made in a timely manner regarding the appropriate tenures to apply i.e. Small Scale Salvage Vs Brood Removal Vs Production Harvesting and allows the planning process to get started.
 - D.3. Allowing the Exhibit "A" clearance process to be started on those areas designated for harvesting.

- D.4. Providing for issues such as: FN consultations; agency referrals; and FDP planning to have the best chance to be completed in a timely enough manner to allow harvesting to commence the winter following discovery.
- D.5. Allowing ground probing to start immediately in designated areas.
- E. Licensees and Small Business submit Bark Beetle Management Plans (BBMP's) for review in Dec/Jan. Where appropriate, BBMP's can be requested by the DM as part of the code requirement for FH assessments.
- F. Information contained within the BBMP's, including detailed maps, outlined results of ground probes and the treatment options chosen is reviewed for approval by MOF staff in Dec/Jan. Map details include:
 - F.1. Bark Beetle GPS'd infestation locations for both spruce and pine beetles, including infestation identification numbers. (NOTE: infestation identifications, the numbered designation and all the information pertaining to that site is the type of information that is proposed to be tracked in a common database. A prototype of the database, initiated in the Vanderhoof District, is currently being reviewed).
 - F.2. Proposed and historical bark beetle harvest information and,
 - F.3. Descriptions of treatment to occur at each site.
- G. Additional district Bark Beetle management strategies are:
 - G.1. All brood removal harvest blocks (under 1 ha) are harvested during the winter with a requirement to have infested timber milled prior to July 15th (pre-flight).
 - G.2. That one licensee had concerns regarding the deterioration of quality in Balsam logs that had to be set aside in the mill yard in order to meet the requirements to "hot-mill" pine coming in from beetle blocks. (Beetle blocks can be identified by assigned timber marks and by been shown in the licensee's annual stratification plans. In this way, the requirement to "hot-mill" or mill prior to the beetle flights can be monitored).
 - G.3. That one licensee now delineates the infested portions of their production beetle blocks and plans to harvest and mill the infested timber portions of the block during the winter months. In this way non-infested wood from timber marks assigned to beetle blocks are approved to come into the mill during the summer. This has accommodated the mill's need to process Balsam during the hotter, dryer months and also the operational difficulties faced by the mill of having to switch back and forth between milling Balsam and Pine during the summer.

5.11 Forest Health Maintenance Objectives

- A. To maintain or improve the health, vigor and vitality of the forested land base while reducing resource losses caused by the various damaging agents.
- B. Ensure damaging agents do not impede silviculture obligations or investments and protect timber resource by:

Objective 1: Attempting to control Mountain Pine Beetle, Spruce Bark Beetle, and Western Balsam Bark Beetle populations, and;

Objective 2: Monitoring defoliator's populations;

Objective 3: Monitoring and assessments of other insects, diseases, animal and abiotic damages.

Strategy to meet Forest Health objective 1: Bark Beetles

Assess high risks sites annually and prioritize treatments as per the approved *District Bark Beetle Strategy (Morice District, January 1998)*. Continue to work closely with industry, other agencies, the general public and First Nations to increase awareness of problem areas in order to coordinate efforts.

Strategy to meet Forest Health objective 2: Two Year Cycle Budworm

Conduct overview flights and photograph annually to monitor and assess defoliation levels. In coordination with regional entomologist, participate in egg mass and larvae sampling to determine life cycles and population levels. Coordinate tree damage assessment plots in conjunction with timber cruise plots. Meet biannually with Prince George Forest Region and adjacent districts to coordinate control efforts such as defoliation spraying if necessary.

Strategy to meet Forest Health objective 3: Other Pest Problems

Determine problem areas and incidence levels through aerial and ground surveys. Track problem areas on opening files, ISIS and MLSIS. Work closely with industry to monitor and prioritize treatments as necessary.

In conjunction with regional experts, continue to host pest workshops to educate the forest industry on strategies and tactics including pest detection, assessment and control.

5.12 Forest Health Maintenance Program

MORICE TSA

Table D: Forest Health Maintenance Activities
Prepared: September 23, 1999

Activities	Units	Five-year Plan Goals (ha)					Annual Plan 2000/01			
		2000/ 2001	2001/ 2002	2002/ 2003	2003/ 2004	2004/ 2005	Funding (\$000)	Unit Cost (\$)	Priority	Funding Source
1. Ground Surveys	ha	70	70	70	70	70	\$21,000	\$300	CRITICAL	VOTE
2. Aerial Surveys	hours of flying time	92	92	92	92	92	60,000	652	CRITICAL	VOTE
3. Fall and burn treatment	trees	4800	4800	4800	4800	4800	360,000	75	CRITICAL	VOTE
4. MSMA treatment	trees	15500	15500	15500	15500	15500	310,000	20	CRITICAL	VOTE
5. Pheromone baiting	trees	1250	1250	1250	1250	1250	50,000	40	CRITICAL	VOTE
6. Defoliator spraying	ha	0	0	0	0	0	0	0		
7. Studies	number	0	0	0	0	0	0	0		
8. Other (GPS/mapping)	person/day	33	33	33	33	33	10,000	303	CRITICAL	VOTE
Totals		21745	21745	21745	21745	21745	\$811,000	\$37		

* ground surveys units are by person-days. Probing cannot be measured by hectare.

6.0 THE FOREST RECREATION AND TRAIL MAINTENANCE COMPONENT

6.1 Objectives for Managing Forest Service Recreation Sites and Trails

The MOF will continue to manage the recreational use of Crown land by providing a range of rustic campgrounds and trails (including some high use, heavily developed facilities) in areas where other agencies or commercial operators are not willing or interested in providing public recreation facilities.

The primary objective at this time is to keep the campground and trails open and safe for the public to use by providing a minimum level of service, graduating to a basic level of maintenance if and when funding permits. Definition of basic campground maintenance: clean outhouses, tidy/rake area, clean fire pits, make minor repairs to structures, pump toilets (when necessary), collect garbage (when containers provided) and manage hazards (e.g., hazard trees).

If additional funds are available they should be used to carry out other services such as painting, structure replacement, campground/trail rehabilitation, or development of new campgrounds/trails (if achievable at no increase in net cost – development or maintenance costs).

6.2 The Recreation Sites and Trails program

Recreation Site/Trail Management Activities

		Plan Goals (# sites (S) and Trails (T))					2000/01		Funding Source	
Activities	Units	2000/01	2001/02	2002/03	2003/04	2004/05	Funding \$ (000)	Average Unit Cost\$	Priority 1	Ministry / Licensee / FRBC
Obligations for Public Safety and Environmental Protection at Recreation Sites and Trails										
Inspections	# of Sites	23	23	25	26	26	1		H	Ministry
Inspections	Km of Trail	8	38	38	38	40	1		H	Ministry
Maintenance Service Units Sites	# of Sites	23	23	25	26	26	25		H	Ministry
Maintenance Service Units Trails	Km of Trail	8	38	38	38	40	5		H	Ministry
Site Maintenance Supplies	# of Sites	23	23	25	26	26	5		H	Ministry
Trail maintenance Supplies	Km of Trail	8	38	38	38	40	1		H	Ministry
Rehabilitation of Recreation Sites / Trails										
Site plans	#	3	3	4	3	4	1		M	Ministry
Trail plans	#	2	0	0	0	2	1		M	Ministry
Site Restoration	# of sites	3	3	4	3	4	30		H	Ministry
Trail Restoration	km of trail	2	0	0	0	2	10		H	Ministry
Structure restoration /replacement	# of sites	3	3	4	3	4	5		H	Ministry
Structure restoration /replacement	km of trail	2	0	0	0	2	1		H	Ministry
Development of Recreation Sites / Trails										
Site plans	#	0	2	1	0	0	0			
Trail plans	#	1	0	0	1	0	2		H	FRBC
Site Construction	# of Sites	0	2	1	0	0	0			
Trail Construction	km of Trail	30	0	0	1	0	50		H	FRBC
Site Structures	#									
Trail Structures	#									
Site Studies 2	#									
Trail Studies	#									

NOTES

1 Priority rating: Rate high, Medium, Low

2 Include specific studies/plans that need to be done to support this program area. Clearly identify in the RM and the type of study/plan and realistic funding needs for 2000/01. Indicate the level of funding required for subsequent years to continue them.

7.0 THE ENHANCING ENVIRONMENTAL VALUES COMPONENT

7.1 Introduction to Enhancing Environment Values (EEV)

The EEV Program in the Morice Forest District includes participation from Houston Forest Products Co. and Northwood Inc. as the two stakeholders and the Ministry of Forests and MELP. Only one meeting was scheduled with the stakeholders for their input and they have been incorporated as well as possible into this document.

7.2 Strategic Objectives

With less funding being available to FRBC, there has been a shift in the direction that EEV is proceeding. While the main goals such as restoration and maintenance of fisheries, aquatic and forest resources remain unchanged, the plan for the future is to narrow the focus of WRP investments.

Funding will now be channeled into the key priority watersheds as defined by the Ministry of Forests and MELP Regional staff. The goal, once the key watersheds have been identified, is to complete 20 percent of watershed regionally over the next five years.

7.3 Program Strategies

The new strategy now is to focus on resource values, mainly water quality for people, fish and fish habitat. As in the past, it is expected that the watersheds will be restored in an integrated whole watershed approach. At the present time the key priority list is done at the district level and does not rank the watersheds regionally.

7.4 Program Investment Tactics and Resource Activities

Keeping in mind the investment plans of FRBC to complete 20% of the key watersheds, the district would like to do work in a sequence. The Ministry of Forest's plan is to work through the priority watersheds. Our goal is to allow the lead proponents to finish the high and medium priority works in a key area then move on to the next watershed to begin high and medium priority works without completing the rest of the low priority up slope works. The main resource management activities for the Ministry of Forests would be:

- ◆ to replace or remove critical culvert crossings, mainly those that impede fish passage; and
- ◆ to deactivate roads that have a high erosion potential and connectivity to streams; deactivate roads that, due to potential for failure, may pose a threat to public safety or threaten fish habitat.

MELP has supplied a list of the landscape units and the fish species at risk or of regional significance. All the watersheds listed are targeted by MELP but have not been listed as medium, high or very high.

MELP was also ask to submit a list of their proposed resource management activities but they have not submitted one by the RMP submission deadline.

7.5 Program Goals

The goal of the program is to complete 20% of the key priority watersheds. The Morice District may be best suited to use the transition period to complete the sites that have been identified as barriers to fish at sites throughout the district. Work would then begin on completing the key areas.

7.6 Activity Recommendations

The Ministry of Forests completed a watershed priority-ranking list last year. That list takes into account the amount of past development, physical characteristics and natural resources. The list was developed based mainly on local knowledge and without input from other agencies but was not based on landscape units as is now requested. Input has been received from Houston Forests Products Company and the MELP as to watershed ranking. The list of landscape units is shown in Appendix 1. The landscape units that would list out as high, from all the input as seen by the Ministry of Forests, would be Nadina, Nanika, Owen, Parrotts, Valley, Fulton, North Babine and Tochcha/Natowite. The Ministry of Forests has Level 2 assessments and some detailed designs for works to be done in watersheds ranked high. The MELP has not supplied a list of the past works done by the proponents in the different landscape units.

It is anticipated that most road deactivation would be completed after the in-stream and riparian work has been done so that access is not restricted before the work is done.

The stakeholders would like to be able to work in any key priority watershed that may be in their chart area. The work required to call a watershed complete is not known at this time as FRBC does not have a definition of complete in regard to EEV.

7.07 Appendix 1

Landscape Unit	Watershed Unit	Pop HRE	Pop Prov Sign	Pop Reg Sign	BEO	Water Use	Targeted?
Troitsa				BB RB	H		Yes
	Kasalaka Creek			BB RB			
	Troitsa Lake						
Sibola				DV MW RB	H		Yes
	Tahtsa Lake			DV MW RB			
Whitesail				RB KO MW BB	I		Yes
	Whitesail Lake/Reach			RB KO MW BB			
Tahtsa				KO DV RB MW	L		Yes
	Whiting Creek			MW RB			
	Sibola Creek			RB			
	Andrews Creek			RB KO			
	Tahtsa Reach			DV RB MW			
Nanika			BT CT	RB LT	H	Y	Yes
	Nanika Lake		BT CT	RB LT			
	Bergeland Creek		BT				
Kidprice		CO	BT CT	CH ST SK RB MW	I		Yes
	Lamprey	CO	BT CT	ST MW RB			
	McBride	CO	CT	MW LW BB			
	Nanika River	CO	BT CT	CH ST SK RB MW			
	Kidprice Lake		BT	RB			
	Cedric Creek	CO	CT	CH RB			
	Nado Creek	CO	CT	ST MW RB			
Morice Lake		CO	CT BT	SK ST CH PK KO BB RB MW LW	H		Yes
	Morice Lake	CO	CT BT	SK ST CH BB RB MW LW			
	Morice River	CO	CT BT	CH PK SK ST KO MW RB			
	Atna Lake	CO		SK LT MW			
	Atna Creek	CO					
Burnie			CT	RB KO DV MW BB	H		Yes

	Upper Burnie Lake		CT	RB KO DV MW			
	Lower Burnie Lake		CT	KO MW BB			
	Burnie River		CT	DV			
Gosnel		CO	CT BT	CH PK ST MW RB	I		Yes
	Gosnell Creek	CO	CT BT	CH PK ST MW RB			
	Shea Creek	CO	CT BT	ST MW RB			
Thautil		CO	BT CT	CH PK ST MW RB	H		Yes
	Thautil River	CO	BT CT	CH PK ST MW RB			
	Starr Creek			ST			
	Gabriel Creek	CO	BT				
Houston-Tommy		CO	BT CT	SK CH ST PK MW RB	H		Yes
	Houston-Tommy Creek	CO		ST PK			
	Morice River	CO	BT CT	SK CH ST PK MW RB			
Owen		CO	BT CT	CH SK ST PK MW RB	I		Yes
	Owen Creek	CO	BT	ST MW RB			
	Fenton Creek	CO		ST			
	Peacock Creek	CO					
	Morice River	CO	BT CT	CH SK ST PK MW RB			
Nadina				CH SK MW RB BB LW LT	I		Yes
	Nadina Lake			SK KO MW RB			
	Nadina River			CH SK MW RB BB			
	Tagetochlain Lake			BB LT LW MW RB			
	Shelford Creek			RB			
	Shelford Lake			RB			
Parrott				BB LT MW RB	L		Yes
	Parrot Creek			BB LT MW RB			
	Parrott Lakes			RB LT			
Buck		CO		CH ST MW RB	L	Yes	Yes
	Buck Creek	CO		CH ST MW RB			
	Dungate Creek						
	Aitken Creek						
Valley		CO	BT DV CT	SK CH ST PK MW RB	I	Yes	Yes
	Bulkley River	CO	BT CT	SK CH ST PK MW RB			
	Emerson Creek		BT DV	CH RB ST			

	Barren Creek	CO		ST RB			
	Dunalte Creek	CO	BT	CH ST RB			
	McQuarrie Creek	CO		ST RB			
	Rickfield Creek	CO		CH ST RB			
	Byman Creek	CO		CH ST RB			
Fulton		CO	CT	SK PK CH MW RB BB LT	L	Yes	Yes
	Fulton River	CO	CT	SK PK CH MW RB			
	Fulton Lake		CT				
	Guess Creek		CT				
	Tanglechain Creek		CT	BB LT MW RB			
Topley		CO		SK KO MW RB	L	Yes	Yes
	Tachek Creek	CO		SK KO MW RB			
	tribs to Babine Lake	CO		SK RB			
Granisle				SK RB DV	L	Yes	Yes
	various tribs to Babine Lake	CO		SK RB DV			
Morrison		CO	CT	SK KO BB LT LW MW	L		Yes
	Morrison Lake	CO	CT	SK KO BB LT LW MW			
	Morrison Creek	CO		SK KO RB			
	tribs to Babine Lake	CO		SK RB DV			
North Babine		CO		SK BB KO MW RB DV	L		Yes
	Big Loon Creek	CO		SK BB KO MW RB			
	Big Loon Lake			LW RB			
	various tribs to Babine Lake	CO		SK RB DV			
Tochcha/Natowite			BT	KO LT MW RB	I		Yes
	Tochcha Lake		BT	KO MW RB			
	Gloyazikut Creek						
	Hautete Creek			KO MW			
	Natowite Lake		BT	KO LT MW RB			
	Nizik Creek			RB			
Note: Yellow highlighted cells represent the fisheries values found within the entire Landscape Unit							
Pop HRE	Population at High Risk of Extinction						

Pop Prov Sign	Population of Provincial significance					
Pop Reg Sign	Population of Regional significance					
BEO	Biological Emphasis Option					
Water Use						

Morice Forest District Resource Management Review

ADDITIONAL INFORMATION

November 30, 1999

Criteria	FRBC's comments	Additional Information
Regional Requirements		
2. Stakeholder participation	Not achieved	The RMP contains a summary of the issues discussed during the consultation. After this meeting, a copy of the RMP was sent to licensees on October 18, 1999 for their review. MoF did not receive any comments back from licensees. The Morice District has already informed FRBC on October 20, 1999 that both licensees had agreed with the RMP content.
3. Developed for Woodlots ...	Not achieved	Woodlot goals have been delivered by the major licensees in 1999/2000 (796 ha of survey) as there was no mechanism to provide funding directly to Woodlot owners (no annual agreement in our district). As the results of the 1999 surveys have not been compiled yet, no goals have been identified for Woodlots at this time. If FRBC does not enter into annual agreements with Woodlots owners (or association), the goals will be delivered by the major licensees as part as the backlog program. Ranking and prioritization will follow the RMP strategy.
9. Consider TSA, TFL and woodlot licence objectives	Partly achieved	Specific Woodlot objectives were not considered at this time.
18. Provide a sufficient detailed description of the general types of sites and opportunity for treatments	Not achieved	The RMP provides the general criteria for treatment opportunities. This seems to have been missed by the reviewer(s). Ex: s. 5.7.1 WT 1 (B.) and (C.) state the baseline criteria for brushing treatments. s 5.7.1 WT 2 provides detailed criteria for treatment priority. s 5.7.2 provides some details but stays rather general as the selection criteria for treatment opportunities are already well described in the FPC guidebooks. Section 5.5.2 also provide information on the potential treatment and treatable area.
Management Unit RMP Outline		
3.1 Basic Data	Partly achieved	The RMP clearly states that the site class data are not available.
3.5 Opportunity to improve timber quality	Not achieved	Discussed as an information Gap in section 5.6. The RMP states the interim measure in section 5.6.1. Management for clear timber through long rotation will be achieved through unmanaged stands on medium and lower sites.
3.5.1 Potential treatments	Not achieved	Potential treatments stated in section 5.6.1 (missed by FRBC ?)
3.5.2 Potential strategy	Not achieved	See section 5.6.1
3.5.3 Timber Forecast Scenario	Not achieved	Not available at this time as stated in section 5.6.1

3.6 Habitat supply	Not achieved	Not included in the RMP at this time
3.8 Incremental Silv. Program	Not achieved	1. The RMP already presents a 5 year program in section 5.8 2. The program proposed is within the historical range 3. Incremental silviculture assumptions were not used in the last TSR (1996)
3.9 Job outcomes...	Not achieved	Not included at this time
4.3 Forest Health Enhancement	Not achieved	No program identified at this time
4.6 Habitat supply	Not achieved	Not included at this time. No habitat objectives identified at this time.